

**2019 Annual Drinking Water Quality Report**  
**Town of Chincoteague Waterworks**  
*PWSID 3001175*

**INTRODUCTION**

This Annual Drinking Water Quality Report for calendar year 2019 is designed to inform you about your drinking water quality. Our goal is to provide you with a safe and dependable supply of drinking water, and we want you to understand the efforts we make to protect your water supply. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

For information pertaining to how you may participate in decisions regarding your water supply you may contact:

Harvey Spurlock  
Public Works Director  
6150 Community Drive  
Chincoteague Island, VA 23336  
(757) 336-3366

**GENERAL INFORMATION**

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm-water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm-water runoff, and residential uses;
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic system;
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities

Drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the concentrations of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Maximum Contaminant Levels (MCLs) are set at very stringent levels by the U.S. Environmental Protection Agency. In developing the standards EPA assumes that the average adult drinks 2 liters of water each day throughout a 70-year lifespan. The EPA generally sets MCLs at levels that will result in no adverse health effects for some contaminants or a one-in-ten-thousand to one-in-a-million chance of having the described health effect for other contaminants.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

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EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

### **SOURCE OF YOUR DRINKING WATER AND TREATMENT**

The Town of Chincoteague water system receives its water from wells located on the Mainland. Your water is treated with chlorine to ensure water quality.

The Virginia Department of Health conducted a Source Water Assessment of the Waterworks in 2014. The wells were determined to be of low susceptibility to contamination using the criteria developed by the state in its approved Source Water Assessment Program. The assessment report consists of maps showing the Source Water Assessment area, an inventory of known Land Use Activities and Potential Conduits to Groundwater utilized at Land Use Activity sites in Zone 1, Susceptibility Explanation Chart and Definitions of Key terms. The report is available by contacting the waterworks system owner/operator at the phone or address provided above.

### **PER-AND POLY-FLUOROALKYL SUBSTANCES (PFAS)**

PFAS are manmade compounds used extensively in a wide variety of consumer products and are also components of firefighting foams. NASA conducted training with a commonly-used firefighting foam containing PFAS chemicals at a firefighter training area located on the Wallops Main Base, starting in the 1980's. This resulted in PFAS contamination of shallow groundwater in associated areas. NASA, in collaboration with local, state, and federal agencies, is monitoring the facility's groundwater and drinking water wells, along with the Town of Chincoteague's drinking water wells--located on NASA property.

In 2016, the EPA issued updated Lifetime Health Advisory (LHA) level guidelines of 70 parts per trillion for two PFAS compounds, PFOS and PFOA, in drinking water. NASA has been sampling the drinking water for these compounds since 2017.

NASA will continue to monitor drinking water supplies for the Wallops Flight Facility and the Town of Chincoteague. The agency will continue to share all drinking water sampling results with local officials, EPA, Virginia Department of Environmental Quality (VDEQ) and the Virginia Department of Health (VDH), and will provide information to the public.

For past Wallops Information Sheets on PFAS testing, please see:

<https://www.nasa.gov/content/information-on-wallops-pfas-testing>.

For additional information on PFAS, visit EPA's dedicated website: <https://www.epa.gov/pfas>.

### **DEFINITIONS**

In this report you will find many terms and abbreviations you might not be familiar with. The following definitions are provided to help you better understand these terms:

- Non-detects (ND) – Lab analysis indicates that the contaminant is not present.
- Parts per million (ppm) or milligrams per liter (mg/l) – One part per million corresponds to one minute in 2 years, or a single penny in \$10,000.
- Parts per billion (ppb) or micrograms per liter (µg/l) – One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- Maximum Contaminant Level Goal (MCLG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- Maximum Residual Disinfectant Level (MRDL) – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- Maximum Residual Disinfectant Level Goal (MRDLG) – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.
- Level 1 Assessment – An evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment.

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- Level 2 Assessment – An evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment in a more comprehensive investigation than a Level 1 assessment.
- Sanitary Defect – A defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.

### WATER QUALITY RESULTS

Contaminants in your drinking water are routinely monitored according to Federal and State regulations. The EPA requires that Table I reflect monitoring results for the period of January 1<sup>st</sup>, 2015 through December 31<sup>st</sup>, 2019. The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, may be more than one year old. Only the most recent sample results from the prescribed period are reported. The table lists only those contaminants that had some level of detection. Many other contaminants have been analyzed but were not present or were below the detection limits of the lab equipment.

#### WATER QUALITY RESULTS (Detected Contaminants Only)

Contaminant (units)	MCLG	MCL	Level Found	Range	Violation	Sample Date	Typical Source of Contamination
Arsenic (ppb)	0	10	8	N/A	No	04/16/18	Erosion of natural deposits.
Gross Beta (pCi/L)	0	50 *	14.5**	N/A	No	4/03/17	Decay of natural & man-made deposits
Radium-228	0	5	1	N/A	No	4/03/17	Decay of natural & man-made deposits

A note about arsenic in drinking water: While your drinking water meets EPA’s standard for arsenic, it does contain low levels of arsenic. EPA’s standard balances the current understanding of arsenic’s possible health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and linked to other health effects such as skin damage and circulatory problems.

\*The MCL for Beta particles is 4mrem/year. EPA considers 50pCi/L to be the level of concern for Beta particles.

\*\*Because your water was below 50 pCi/L no testing for individual Beta particle constituents was required.

#### UNREGULATED CONTAMINANTS

Contaminant (units)	MCLG	MCL	Level Found	Range	Violation	Sample Date	Typical Source of Contamination
Sodium (ppm)*	N/A	N/A	40.0	N/A	No	4/16/2018	Erosion of natural deposits widely distributed in nature, discharge from softeners, human or animal waste disposal, leachate from landfill or seawater intrusion

\*There is presently no established standard for sodium in drinking water. Water containing more than 270 mg/L of sodium should not be used as drinking water by those persons whose physician has placed them on moderately restricted sodium diets. Water containing more than 20 mg/L should not be used as drinking water by those persons whose physician has placed them on severely restricted sodium diet.

**DISINFECTION AND DISINFECTION BY-PRODUCTS**

CONTAMINANT (units)	MCLG or MRDLG	MCL Or MRDL	Level Detected	Range	Sample Date	Violation	Typical Source of Contamination
Chlorine (ppm)	4	4	0.86	0.20 – 2.00	2019	No	Water additive used to control microbes
HAA5 (ppb)	60	60	5.1	N/A	2019	No	By-product of drinking water chlorination
TTHM (ppb)	80	80	13.0	N/A	2019	No	By-product of drinking water chlorination

**LEAD AND COPPER CONTAMINANTS**

CONTAMINANT (units)	MCLG	Action Level	Level Detected	Range	# of samples above AL	Sample Date	Typical Source of Contamination
Copper (ppm)	1.3	1.3	0.493	0.080-0.710	0	2018	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching of wood preservatives.
Lead (ppb)	0	15	<2.0 (90 <sup>th</sup> percentile)	<2.0 – 2.98	0	2018	Corrosion of household plumbing; Erosion of natural deposits

A note about lead in drinking water: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

**E.COLI BACTERIA MONITORING RESULTS**

MCL	MCLG	Number of Positives	Violation	Sample Dates	Major Source of Contamination
Routine and repeat samples are total coliform-positive, and either is <i>E. coli</i> -positive or system fails to take repeat samples following <i>E. coli</i> -positive routine sample or system fails to analyze total coliform-positive repeat sample for <i>E. coli</i>	0	0	No	2019	Human and animal fecal waste

**SYSTEM ASSESEMENTS FOR TC+** - No assessments were required for this system during this reporting period.

**SYSTEM ASSESEMENTS FOR EC+** - No assessments were required for this system during this reporting period.

**VIOLATIONS** – There were no violations for this system during this reporting year.